



Plant Breeder



Purpose: Students will try to create a new variety of strawberry. Each seed on a strawberry is different and has the potential to become a new variety.

Background: Florida strawberries are available from December through April. They do not ripen after they are harvested. Select fruit that is at the right state of maturity — when the berry surface is fully red. This fruit will offer the maximum sweetness and flavor. Cool berries as soon as possible and store in the refrigerator until ready to use. It comes as no surprise that fresh strawberries are highly perishable. Use them as soon as possible after purchasing for the best flavor, appearance, and nutrient content. Fresh strawberries should be refrigerated and eaten within three to four days of purchase.

Strawberry Facts:

- Plant City, Florida is recognized worldwide as the Winter Strawberry Capital of the World. It is the dominant region in the U.S. that produces strawberries in the winter.
- There are approximately 8,000 acres of strawberries grown in Florida, the second largest producing region in the U.S.
- Eating eight strawberries a day has been shown to lower blood pressure and to improve memory and heart health. Not only that, eating strawberries on a regular basis may lower the risk of some cancers and help reduce obesity.
- Strawberries provide essential nutrients and minerals including fiber, potassium, vitamin C, and powerful antioxidants such as anthocyanins, quercetin and ellagic acid.
- The levels of ellagic acid found in strawberries are five to six times higher than in most other fruits and vegetables. In lab and animal studies, ellagic acid seems to have some anti-cancer properties.
- Strawberries are the only fruit that have seeds on the outside — about 200 of them.
- Strawberry is the second most popular natural flavor. Chocolate is number one. Chocolate-dipped strawberries anyone?

Materials: blender, water, 1 pint of fresh strawberries, strainer, small cooking pot, sponge, spray bottle of water, seedling trays, potting soil

Activity:

1. Before lesson: Hull the strawberries by taking off the green leaves.
2. Fill the blender half full of water.
3. Place the strawberries in the blender.
4. Blend on high until all the strawberry flesh is broken down.
5. Pour the blender contents into the small pot. Place them under running water until the water runs clear. The seeds that float are not good. Only the seeds that sink to the bottom can be used.
6. Pour the water and viable seeds through the fine strainer.
7. Dump the strainer contents on a paper towel and dry.
8. When dry, place the seeds on a damp sponge and place in a warm sunny place, like a windowsill.
9. Keep the sponge damp using a spray bottle until the seeds sprout.
10. When the seeds sprout, they may be transplanted to seedling trays with potting soil.

Resource:

- Florida Strawberry Growers Association
 - <https://floridastrawberry.org/>

